RCA

F38310

digital HDTV

TELEVISION 16:9

38" diagonal Digital High-Definition Monitor-Receiver

- Fully Integrated High-Definition Decoder Built-In
- DIRECTV Receiver Built-In (Receives All Formats)
- Digital Video Resolution (1280H x 1080V)
- 1080i Display of High-Definition Signals
- PERFORMAX™ 16:9 Picture Tube
  – 0.78mm Center Dot Pitch
  – Wide Screen Displays Full Picture Content
- 3D Y/C Digital Frame Comb Filter
- Advanced Twin Tuner™ Picture-In-Picture (NTSC Only)
- SYNCROSCAN™ HD Component Video Inputs
- SRS Focus[1] Audio Technology
- Optical Output Dolby Digital[2] Audio

RCA

Changing Entertainment. Again.

www.rca.com

F38310

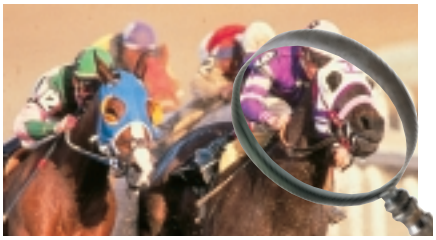
Picture

What is HDTV?

For nearly 60 years, analog television has been the broadcast standard. This standard is now being replaced by digital television, which uses a continuous stream of computer-like numbers to transmit pictures, sound, and information. The computer numbers are translated into pixels. The higher the pixel number, the better the picture. HDTV can receive up to ten times as many pixels as today's TV—that's 2,000,000 pixels compared to 200,000.

Standard NTSC broadcast

200,000+ pixels



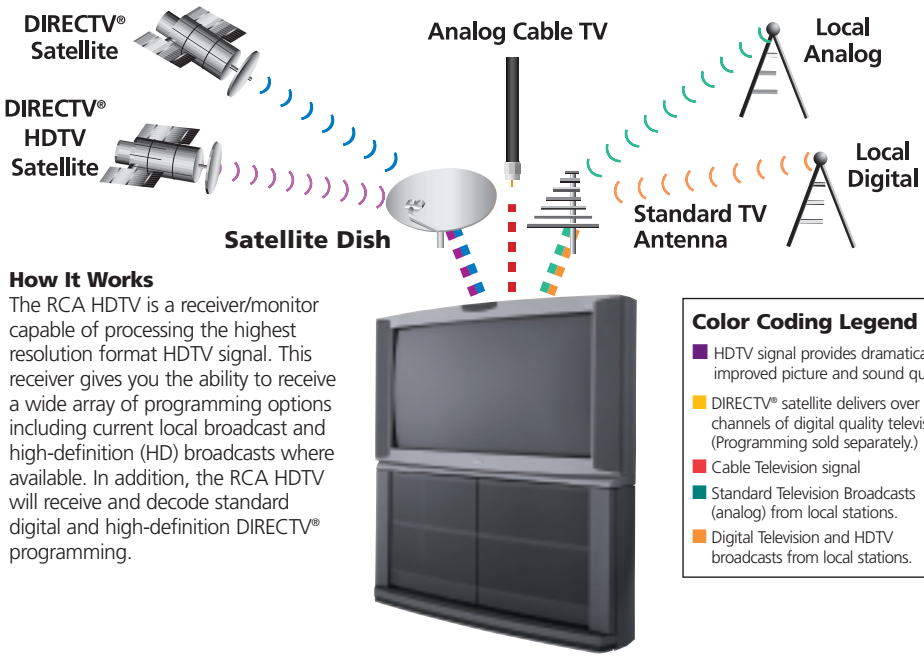
HDTV

1920 X 1080 Lines = 2,073,600 pixels

- **High-Definition Display System**
  The RCA F38310 high-definition television offers a 38"-diagonal wide screen (similar to a movie screen) for a breathtaking, lifelike picture. The high-definition optical system provides rich, accurate color and pinpoint detail. Even today's programming will look better on RCA high-definition sets. That's because each set incorporates our latest in digital up-conversion technology to ensure the cleanest, most detailed picture possible from existing signals, regardless of the source.
- **Digital Up-Conversion**
  A television picture reformatting process in which the scanning format is changed from interlaced to progressive. Normally, this is done to accommodate a receiver display scanning rate which is faster than the transmitted scanning rate. An up-converted, progressively scanned picture has the benefit of minimizing the visibility of scanning lines and edge flicker.

The RCA Advantage.

RCA HDTV comes with the capability of receiving every broadcast and DIRECTV satellite signal currently available.



How It Works
The RCA HDTV is a receiver/monitor capable of processing the highest resolution format HDTV signal. This receiver gives you the ability to receive a wide array of programming options including current local broadcast and high-definition (HD) broadcasts where available. In addition, the RCA HDTV will receive and decode standard digital and high-definition DIRECTV® programming.

Color Coding Legend

- HDTV signal provides dramatically improved picture and sound quality.
- DIRECTV® satellite delivers over 200 channels of digital quality television. (Programming sold separately.)
- Cable Television signal
- Standard Television Broadcasts (analog) from local stations.
- Digital Television and HDTV broadcasts from local stations.

Movies will look like movies!

Most televisions have a 4:3 aspect ratio, but movie aspect ratios are closer to 16:9. With RCA HDTV, you'll see more — the whole picture, complete — of every program broadcast in the widescreen format.

4:3 ratio
16:9 ratio

Enjoy DIRECTV® high-definition programming.

DIRECTV currently provides access to over 225 channels of **digital** entertainment choices. That means more movies, sports, music, news and information than you'll find on most cable or digital TV service—including all the popular TV and music networks, your favorite premium movie channels, 31 commercial-free Music Choice audio channels, up to 55 pay per view movie choices a night and optional pro and college sports subscriptions.

Satellite dish antenna sold separately. Professional installation advised.

Picture

Understanding High-Definition

- **Analog TV**
  Historical method of representing a television signal as a replica (analog) of the original picture and sound. This analog of the original signal is carried throughout the transmitting/receiving process by altering (modulating) either the strength of the signal (a.k.a. Amplitude Modulation or AM) or the frequency of the signal (a.k.a. Frequency Modulation or FM).
- **ATSC Formats**
  The ATSC (Advanced Television Systems Committee) adopted a group of 18 basic video formats in its digital television standard. These 18 formats define the video signal as a combination of parameters stating vertical and horizontal resolution, frame rates, and scanning formats.
- **Digital TV**
  A method of representing a television signal as a series of numbers. The numbers making up the picture elements are encoded in binary form as a series of 1's and 0's. The digital signal can thus be computationally manipulated to eliminate redundancy (compressed) to allow much higher picture and sound quality to be transmitted in a given spectrum space.
- **HDTV (High-Definition Television)**
  Generally describes a television picture comprised of at least one million pixels (five to ten times greater picture resolution [definition] than standard television) and presented in a "widescreen" (16:9) aspect ratio. HDTV also assumes the capability of multi-channel surround sound.
- **QPSK (Quadrature Phase Shift Keying)**
  A means of digital signal transmission in which the binary numbers are converted to symbols which modulate a "carrier" on a single level both in-phase and out-of-phase (quadrature) with the carrier. QPSK is generally the preferred method of satellite digital transmission because at the receiver only a single level needs to be detected from a very weak signal.
- **SDTV (Standard Definition Television)**
  Generally describes the resolution (definition) of a "standard" television picture. A "standard" television picture definition is generally assumed to be that of today's (NTSC) broadcast television signal. However, it could be substantially less (such as VHS quality) or substantially more (such as DVD quality). There are no audio or picture aspect ratio assumptions.
- **VSB (Vestigal Sideband)**
  A means of digital signal transmission in which the binary numbers are converted to symbols which modulate a "carrier" on distinct amplitudes or levels. The VSB method of digital signal modulation was chosen by the ATSC and thus adopted by the FCC as the standard for terrestrial digital signal transmission. VSB is a very robust method of digital signal transmission particularly suited to terrestrial broadcast.

High-Performance Video System

- **3D Y/C Digital Frame Comb Filter**
  The ultimate in color separation —this three-dimensional filter evaluates both current and future video information, eliminating dot and edge crawl, while providing for better transitions between scene changes—resulting in a dramatically enhanced picture.
- **Auto Color Balance (AKB)**
  Resets individual picture tube guns (Red, Green, Blue) to maintain consistent overall picture quality for the life of the tube.
- **Auto Color Control**
  Automatically maintains natural flesh tones and color fidelity from channel to channel and scene to scene.
- **Dark-Tint, High-Contrast Picture Tube**
  Delivers outstanding picture contrast for blacker blacks, brilliant whites, and deep rich colors even in bright room conditions.
- **Deluxe Shielded Tuner with 181-Channel Tuning Capability[3] (NTSC)**
  Special shielding dramatically reduces ghosting caused from off-air pick-up when watching cable channels. Digitally-controlled frequency synthesis tuning system "locks on" to cable and standard signals with unsurpassed accuracy.
- **Dynamic BlackStretch Circuitry**
  Extends black levels in bright scenes to enhance contrast and detail.
- **High-Performance Scan Velocity Modulation (SVM)**
  Improved SVM circuitry automatically varies the scanning speed of the picture tube's electron beam to improve sharpness and detail, especially in high-contrast areas.
- **High-Resolution Dynamic Focus Electron Gun**
  Specifically designed to optimize picture performance of Digital Precision Pitch Picture Tube. Improves corner and edge focus for an overall sharper picture.
- **Wide Band Video Amplifier**
  Delivers high resolution and clarity by extending the video frequency response. Optimizes performance from high-resolution sources such as satellite systems, DVD players, and S-Video signals (S-VHS, Hi8).

PERFORMAX™ Picture Tube

It's what goes on behind the screen that makes this picture incredible. The RCA PERFORMAX™ picture tube is the world's first 38"-diagonal high-definition direct-view picture tube. It delivers an incredible picture that begins in this digital precision pitch picture tube that features a 0.78mm center screen pitch for crisp focus and incredible color. An INVAR Shadow Mask is combined with 65 watts of concentrated picture power to deliver a bright and sharp picture.

Remote

- **Universal Glo-In-The-Dark Remote[4] CRK76TD3**
  You've seen how the RCA HDTV offers the best picture and sound available, but that's only the beginning of the story. With the touch of an extraordinary remote, you'll be able to scroll through some of the most simple-to-use, yet technologically advanced, menu screens ever offered, including on-screen displays that can be controlled by the touch of a button.

Sound

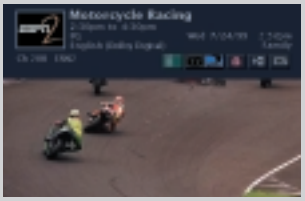
- **Broadcast Stereo with dbx[5] Noise Reduction**
  Improves the clarity and fidelity of stereo broadcasts by restoring dynamic range and suppressing unwanted noise.
- **Dolby Digital[2]**
  Sound technology that offers a range of digitized audio channel information in a compressed package. Dolby Digital[2] provides superior audio quality to whatever system the listener is using—from mono to stereo to 5.1 channels. It delivers all the sound from all the channels that were originally recorded to the system's sound decoder, which then outputs the sound through the available speakers.
- **Front-Fired Speaker System**
  Front-fired speakers offer 10 watts per channel of audio power. Provide excellent imaging while localizing voices at the screen.
- **SRS Focus[1] Audio Technology**
  Ingenious new technology from SRS Labs. Raises the sound stage to ear level providing more lifelike audio. Combined with SRS[1] 3D Sound, it creates a fully immersive "live performance" listening experience from as few as two stereo speakers. Focus[1] technology is ideally suited for home applications when speakers can not be placed in optimal locations for either space or aesthetic reasons.
- **Second Audio Program (SAP)**
  Decodes the second audio program available on some broadcasts.

Convenience

- **Advanced Auto Channel Search**
  Auto Cable/Air Switch sets tuner to cable or "off-air" frequencies during initial setup. Then system automatically scans for and locks active channels into channel memory.
- **Advanced Twin Tuner™ Picture-In-Picture**
  Two built-in independent tuning systems allow both large-picture and small-picture viewing without the need for a second external video source (e.g.VCR). In addition to standard RCA PIP feature of Swap, the Twin Tuner™ PIP System also provides:
  –Continuous Move
  Permits placement of the small picture anywhere on the screen.
  –Commercial Skip-to-PIP
  This exclusive RCA feature allows the main picture to move to the PIP window simultaneously with the activation of an on-screen countdown timer. The viewer can then monitor the original program while browsing through other channels during commercial breaks.
- **Channel Labeling**
  Assign on-screen characters to easily identify channels (e.g. NBC, HBO, ESPN, VH-1).
- **Format Control**
  – 4:3 Centered (positions analog broadcast picture in center of screen)
  – 4:3 Expanded (horizontally stretches 4:3 image to fill 16:9 screen)
  – 16:9 Expanded (helps letterboxed material fill 16:9 screen)
- **On-Screen Menu System**
  On-screen displays make it easy to adjust more picture, sound, and convenience features from either the remote control or the TV front panel buttons.
- **Picture Reset**
  Instantly returns picture to factory settings for Color, Tint, Contrast, Brightness, and Sharpness.
- **V-Chip Parental Control**
  Puts control back into the hands of the viewer by blocking unwanted television broadcasts with U.S. Government required circuitry. Blocks three types of programs: regular television programs, broadcast movies and unrated programs.
  Program rating information is sent by the broadcaster continuously during the program. The television will match program rating to user preference and block the entire program (when program is aired with the encoded signal). User preference is secured using a four-digit password.

Easy-To-Navigate On-Screen DIRECTV Satellite Menu System*

Interactive menus allow access to all HDTV features, all without missing your favorite program.



- **Interactive Channel Banner**
  The translucent, see-through Interactive Channel Banner makes access to the key features of the System fast and easy. We've taken the most exciting features, created icons for each of them, and positioned them in the banner for direct access.

- **SurfGuide™ Feature**
  The SurfGuide feature brings up seven channels of programs at a time. Surf up and down the guide, viewing the current 30-minute or up to a two-hour time window of programming. You'll never miss out on any of the action of your current show, because it stays active in the background while you explore other channels.

- **Information Guide**
  Lists five different channels of programming at a glance. Details on the current highlighted program are displayed in a banner at the top of the screen. Program information changes automatically as the consumer navigates through the guide and highlights different programs.

*Optional antenna dish required to receive DIRECTV® programming (sold separately).

Model	F38310
Picture	
Optimum Contrast Screen	38" 16:9
Picture Power (Watts)	65
Invar Shadow Mask	Yes
Screen Pitch	0.78mm At Center
Dynamic Focus	Yes
Scan Velocity Modulation	Yes
Comb Filter	3D Y/C Digital Frame
Auto Color Control	Color Level & Tint
Auto Color Balance	Yes
BlackStretch	Yes
Color Detail Enhancement	Yes
Wide Band Video Amplifier	Yes
Video Resolution	1280 Horz. x 1080 Vert. Lines
NTSC Line Doubling (Up-Conversion)	Yes
Video Noise Reduction	3-Modes
Calibrated Color Temperature	6500 & 9300 Kelvin
Reception	
ATSC	All Digital Formats VSB*
NTSC	Standard
DIRECTV System Capability	
Signal Reception	QPSK*
HD System	1280 H x 1080 V
Security	Smart Card
Return Path	Telco Modem
Sound	
Audio Power (Watts) Total	20[6] (10 Watts/Ch)
dbx[5] Broadcast Stereo	Yes
Second Audio Program (SAP)	Yes
SRS Sound Retrieval System[1]	SRS Focus
Speaker System	2 - 2.25 x 5" High Compliance
Convenience	
Advanced Twin Tuner™ Picture-In-Picture	NTSC, PIP, Swap and Move
Format Control	4:3 Centered, 4:3 Expanded, 16:9 Expanded
Channel Labeling	Yes
V-Chip Parental Control	Yes
Stereo Headphone Jack	3.5mm Stereo Mini-Jack
Front A/V Input	Composite, L/R Audio
Universal Remote	Glo-In-The-Dark
Back Panel Inputs/Outputs	
A/V Inputs	3 - S-Video/Composite
Component YPrPb Video Input	480i - 480p - 1080i
Dual RF Antenna Inputs	75-OHM
Digital Audio Output	Optical Toslink
Audio Output Jacks	Fixed and Variable
External Speaker Terminals	Yes
User Adjustments	Adjustable Via On-Screen Menu
Basic Adjustments	Contrast, Color, Tint, Black Level, Sharpness
Advanced Adjustments	Noise Filter, Color Temperature
Audio	Bass, Treble, Balance, Volume, Mute
General Specifications	
Screen Size (measured diagonally)	38"
Product Dimensions (H x W x D)	26⅜" x 43⅛" x 25⅞"
Approximate Shipping Weight	216 Lbs.
Optional Base	RRS38G
Finish	Venetian Silver Suede

*See feature explanation in "Understanding High-Definition" section.

Connections

- **Audio/Video Outputs**
  - 1 pair fixed audio outputs (provides constant level output for recording or for stereo system with its own remote).
  - 1 pair variable audio outputs (the output audio level changes with TV's remote).
  - 1 set of speaker jacks for external speakers.
- **Auxiliary Jack Panel**
  - 3 RF inputs (one satellite, two NTSC/ATSC).
  - Dolby Digital[2] output (for optical cable, 5.1, etc.).
  - Access Card Reader holds the Satellite Authorization Card which allows access to satellite programming.
  - Phone Jack Connector allows a phone line connection for automatic access and communication between the satellite access card and the programming provider.
- **Five Sets of Audio/Video Inputs**
  - 3 A/V composite inputs each with auto-detectible S-Video input.
  - 1 set SYNCROSCAN™ HD component video inputs (YPrPb) allows for connection of regular-or progressive-scan DVD players or component-output cable boxes.
  - 1 set audio/video inputs located on front panel.
- **Front A/V Jack Panel**

- **Auxiliary Jack Panel**

- **Back Panel**

Plus

- **Limited Warranty**
  - One year for labor charges.
  - One year for parts.
  - Two years for picture tube.
  - See RCA dealer or visit www.rca.com for complete details.

1 SRS, the SRS symbol, Focus and Sound Retrieval System are registered trademarks of SRS Labs, Inc.
2 Dolby Digital is a trademark of Dolby Laboratories Licensing Corp.
3 Check your cable company's compatibility requirements.
4 Controls the TV plus primary functions of most brands of VCRs, satellite systems, and cable boxes.
5 dbx is a registered trademark of Carillon Electronics Corporation.
6 20 watts = 10 watts per channel, RMS rating into 8 ohms 50Hz-20,000Hz, ± 3db with less than 1% THD.

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